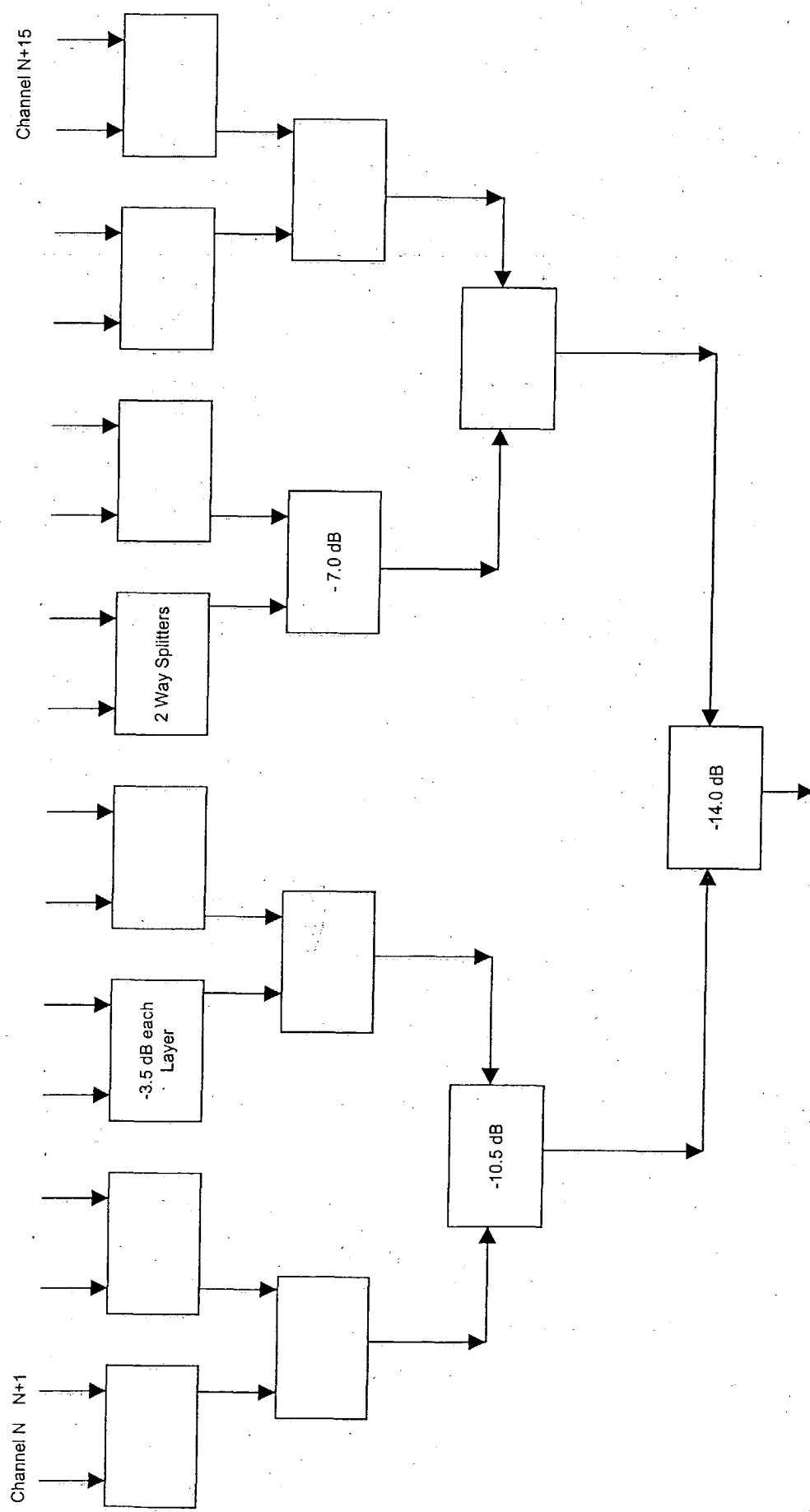


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Our Docket No.: 902_059 NP

Fig. 1
Standard Combiner Configuration
16 Channels Utilizing Broad Band Splitters



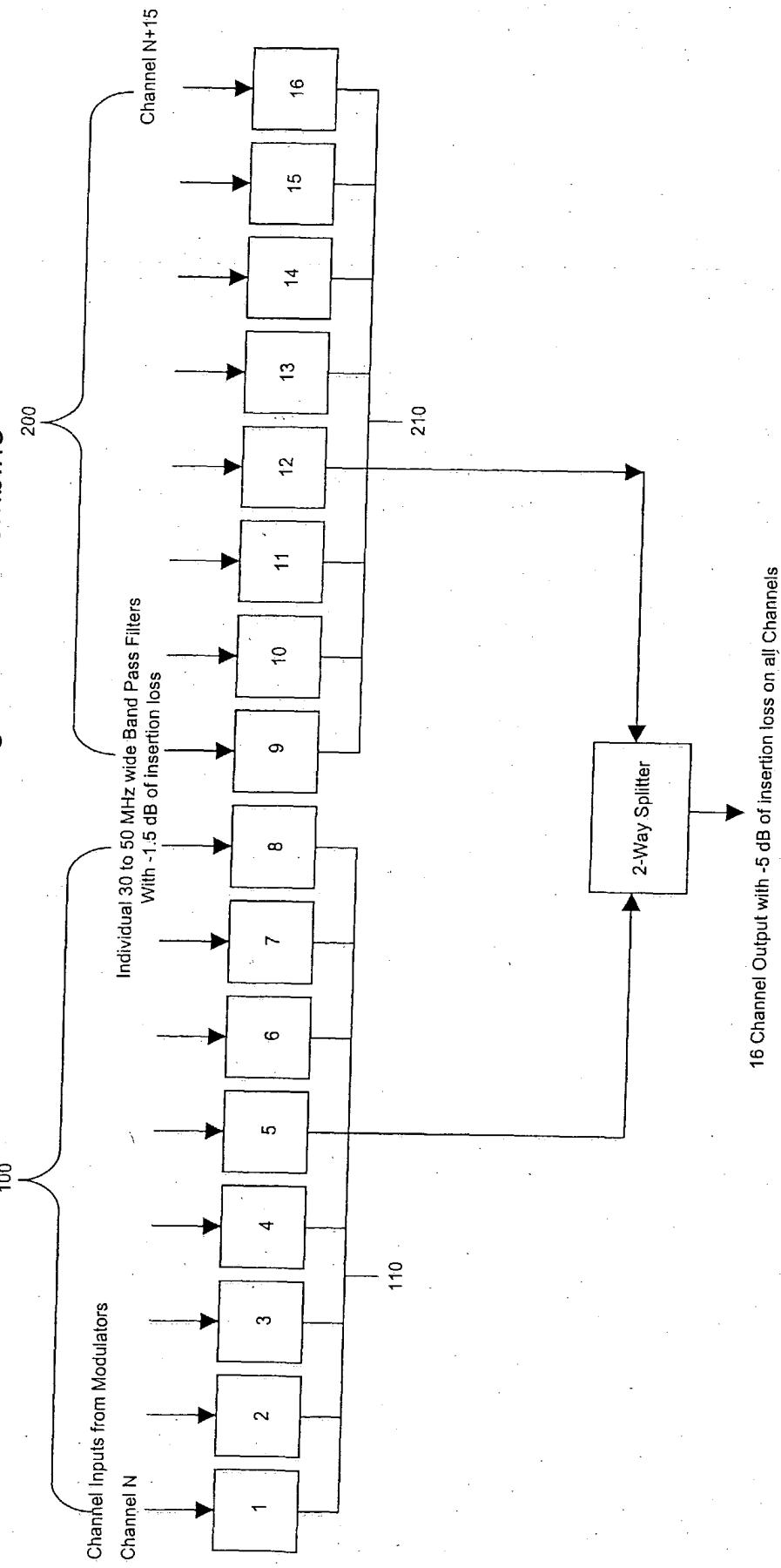
16 Channel Output with -14 dB of insertion loss on all Channels

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Fig. 2

**Proposed Combiner Configuration
16 Channels Utilizing Filters to Combine**

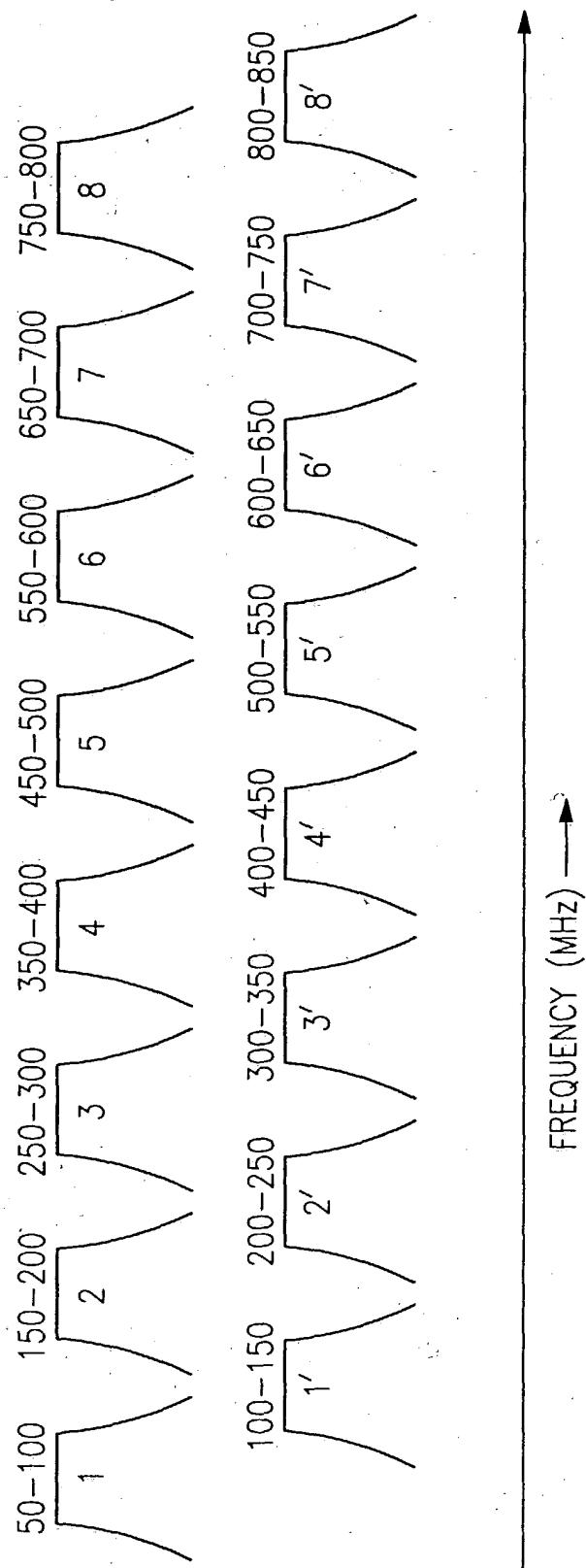


The filters remove any out of band noise or spurs developed by the modulators as well as provide the required isolation to combine the channels from many different sources onto a single signal conduit.

16 Channel Output with -5 dB of insertion loss on all Channels

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Title: APPARATUS AND METHOD FOR COMBINING CATV CHANNELS WITH REDUCED INSERTION LOSS
Our Docket No.: 902_059 NP



FREQUENCY (MHz) →

FIG. 3

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Title: APPARATUS AND METHOD FOR COMBINING CATV CHANNELS WITH REDUCED INSERTION LOSS
Our Docket No.: 902_059 NP

FIG. 4

Filter	Channel No.	Bandwidth
	CATV	TV
	T7	5.75-11.75
	T8	11.75-17.75
	T9	17.75-23.75
	T10	23.75-29.75
	T11	29.75-35.75
	T12	35.75-41.75
	T13	41.75-47.75
	TV-IF	40-46
1	2	54-60
	3	60-66
	4	66-72
	5	76-82
	6	82-88
	FM	88-108
	A5	90-96
	A4	96-102
	A3	102-108
1'	A2	108-114
	A1	114-120
	A	120-126
	B	126-132
	C	132-138
	D	138-144
	E	144-150
	F	150-156
2	G	156-162
	H	162-168
	I	168-174
	7	174-180
	8	180-186
	9	186-192
	10	192-198
	11	198-204
2'	12	204-210
	13	210-216
	J	216-222
	K	222-228
	L	228-234
	M	234-240
	N	240-246
	O	246-252
3	P	252-258
	Q	258-264
	R	264-270
	S	270-276
	T	276-282
	U	282-288
	V	288-294
	W	294-300
3'	AA	300-306
	BB	306-312
	CC	312-318
	DD	318-324
	EE	324-330
	FF	330-336
	GG	336-342

Filter	Channel No.	Bandwidth
	CATV	TV
3'	H H	342-348
	II	348-354
4	J J	354-360
	KK	360-366
	LL	366-372
	MM	372-378
	NN	378-384
	OO	384-390
	PP	390-396
	QQ	396-402
4'	RR	402-408
	SS	408-414
	TT	414-420
	UU	420-426
	V V	426-432
	WW	432-438
	XX	438-444
5	YY	444-450
	ZZ	450-456
	AAA	456-462
	BBB	462-468
	CCC	468-474
	DDD	474-480
	EEE	480-486
	FFF	486-492
5'	GGG	492-498
	HHH	498-504
	III	504-510
	JJJ	510-516
	KKK	516-522
	LLL	522-528
	MMM	528-534
	NNN	534-540
6	OOO	540-546
	PPP	546-552
	QQQ	552-558
	RRR	558-564
	SSS	564-570
	TTT	570-576
	UUU	576-582
	V V V	582-588
6'	WWW	588-594
	XXX	594-600
	YYY	600-606
	ZZZ	606-612
	89	612-618
	90	618-624
	91	624-630
	92	630-636
7	93	636-642
	94	642-648
	100	648-654
	101	654-660
	102	660-666
	103	666-672
	104	672-678

Filter	Channel No.	Bandwidth
	CATV	TV
7	105	678-684
	106	684-690
	107	690-696
	108	696-702
7'	109	702-708
	110	708-714
	111	714-720
	112	720-726
	113	726-732
	114	732-738
8	115	738-744
	116	744-750
	117	750-756
	118	756-762
	119	762-768
	120	768-774
	121	774-780
8'	122	780-786
	123	786-792
	124	792-798
	125	798-804
	126	804-810
	127	810-816
	128	816-822
	129	822-828
	130	828-834
	131	834-840
	132	840-846
	133	846-852
	134	852-858
	135	858-864
	136	864-870
	137	870-876
	138	876-882
	139	882-888
	140	888-894
	141	894-900
	142	900-906
	143	906-912
	144	912-918
	145	918-924
	146	924-930
	147	930-936
	148	936-942
	149	942-948
	150	948-954
	151	954-960
	152	960-966
	153	966-972
	154	972-978
	155	978-984
	156	984-990
	157	990-996
	158	996-1002

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Our Docket No.: 902_059 NP

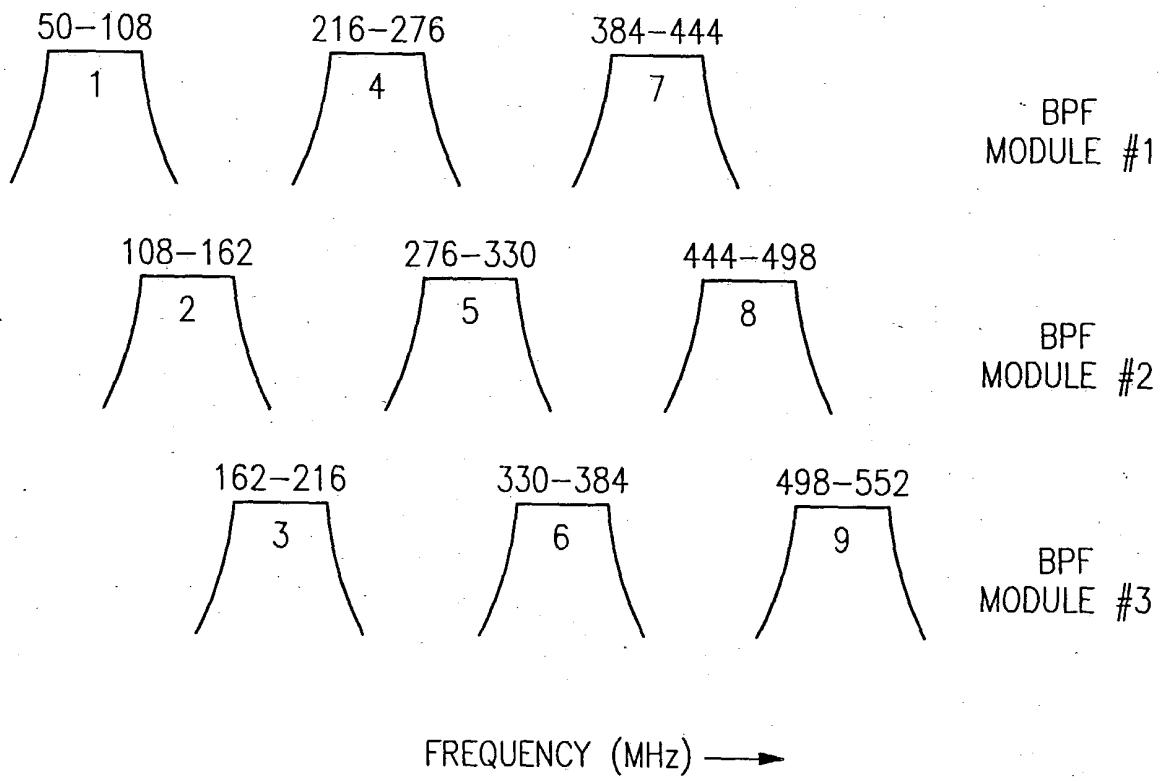


FIG.5

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FIG. 6

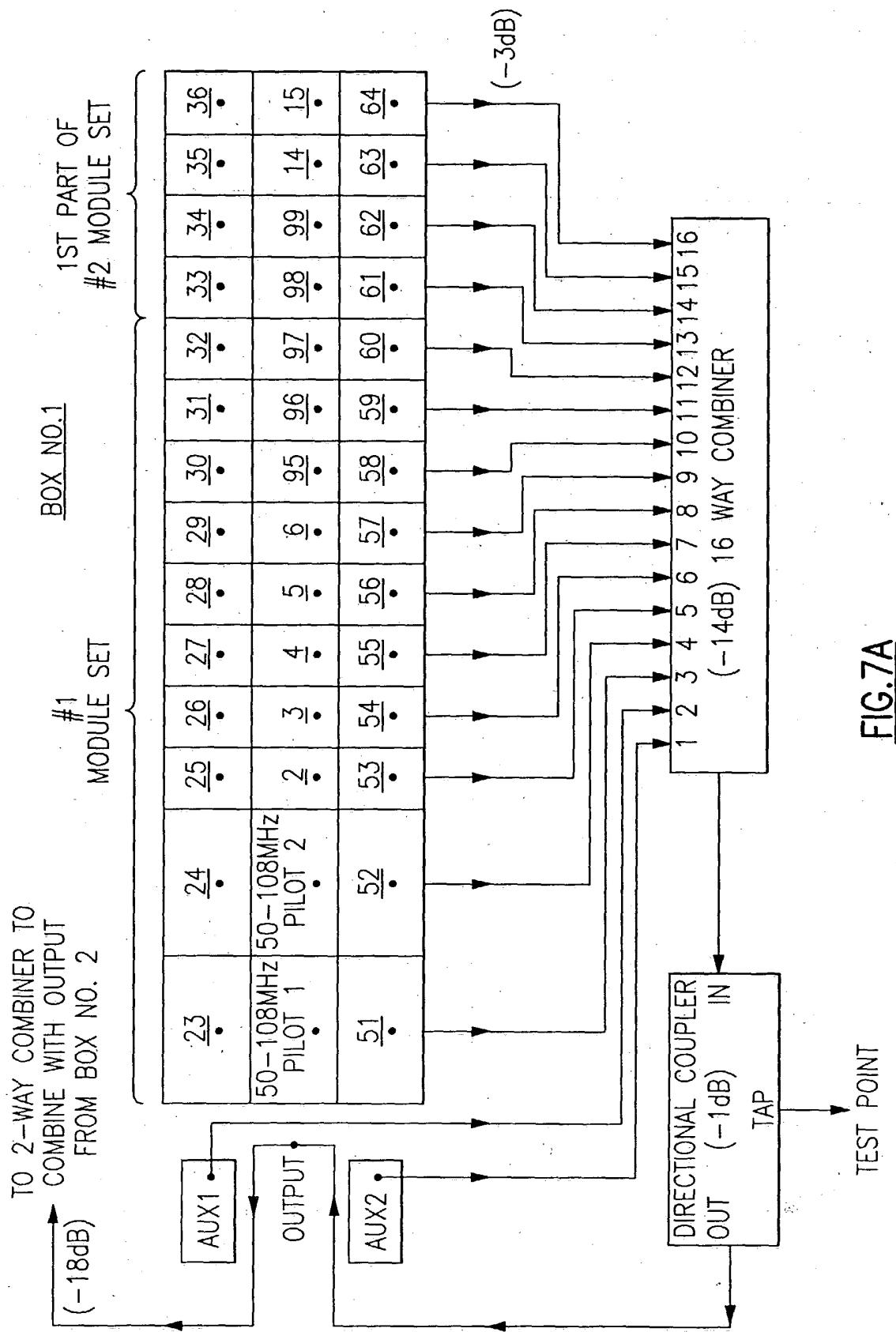
Filter	Channel No.		Bandwidth
	CATV	TV	
1	T7		5.75-11.75
	T8		11.75-17.75
	T9		17.75-23.75
	T10		23.75-29.75
	T11		29.75-35.75
	T12		35.75-41.75
	T13		41.75-47.75
	TV - IF		40-46
	2	2	54-60
	3	3	60-66
	4	4	66-72
	5	5	76-82
2	6	6	82-88
	FM		88-108
	A5	95	90-96
	A4	96	96-102
	A3	97	102-108
	A2	98	108-114
	A1	99	114-120
	A	14	120-126
	B	15	126-132
	C	16	132-138
	D	17	138-144
	E	18	144-150
3	F	19	150-156
	G	20	156-162
	H	21	162-168
	I	22	168-174
	7	7	174-180
	8	8	180-186
	9	9	186-192
	10	10	192-198
	11	11	198-204
	12	12	204-210
	13	13	210-216
4	J	23	216-222
	K	24	222-228
	L	25	228-234
	M	26	234-240
	N	27	240-246
	O	28	246-252
	P	29	252-258
	Q	30	258-264
	R	31	264-270
	S	32	270-276

Filter	Channel No.		Bandwidth
	CATV	TV	
5	T	33	276-282
	U	34	282-288
	V	35	288-294
	W	36	294-300
	AA	37	300-306
	BB	38	306-312
	CC	39	312-318
	DD	40	318-324
	EE	41	324-330
	FF	42	330-336
	GG	43	336-342
	HH	44	342-348
6	II	45	348-354
	JJ	46	354-360
	KK	47	360-366
	LL	48	366-372
	MM	49	372-378
	NN	50	378-384
	OO	51	384-390
	PP	52	390-396
	QQ	53	396-402
	RR	54	402-408
	SS	55	408-414
	TT	56	414-420
7	UU	57	420-426
	VV	58	426-432
	WW	59	432-438
	XX	60	438-444
	YY	61	444-450
	ZZ	62	450-456
	AAA	63	456-462
	BBB	64	462-468
	CCC	65	468-474
	DDD	66	474-480
	EEE	67	480-486
	FFF	68	486-492
	GGG	69	492-498
8	HHH	70	498-504
	III	71	504-510
	JJJ	72	510-516
	KKK	73	516-522
	LLL	74	522-528
	MMM	75	528-534
	NNN	76	534-540
	OOO	77	540-546
	PPP	78	546-552

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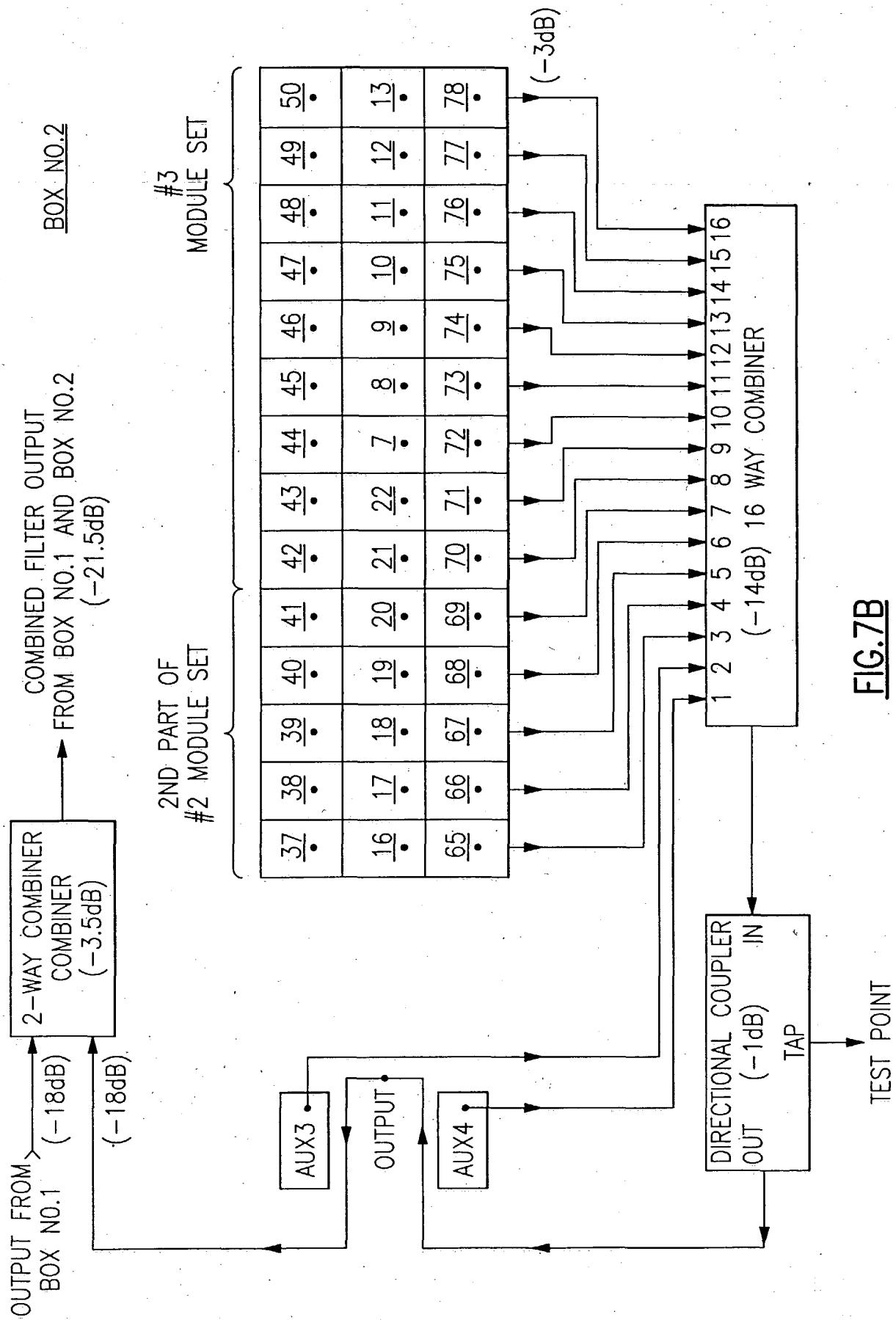
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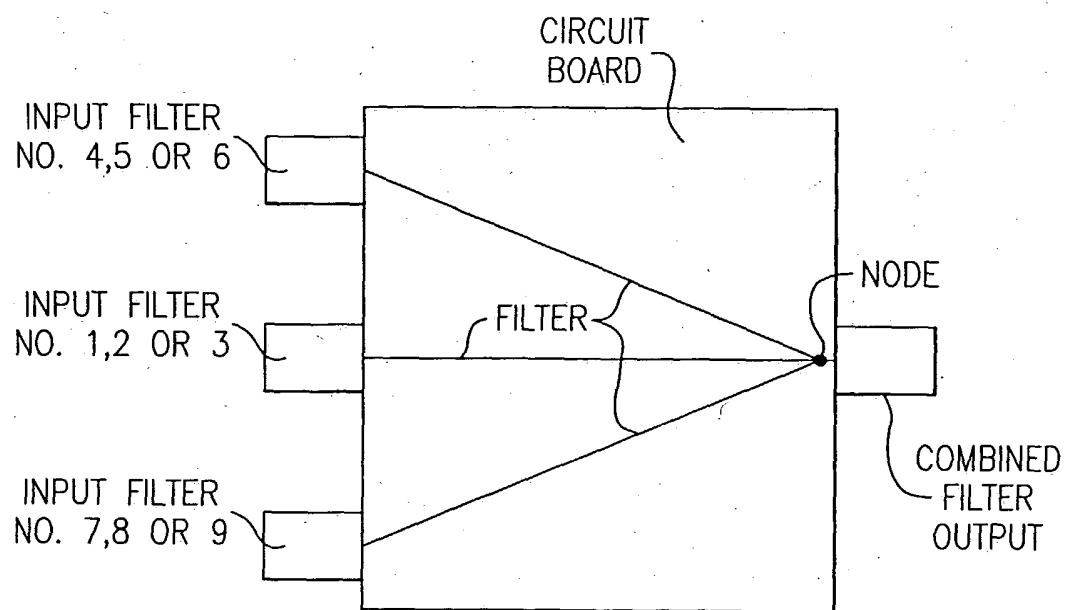


FIG.8

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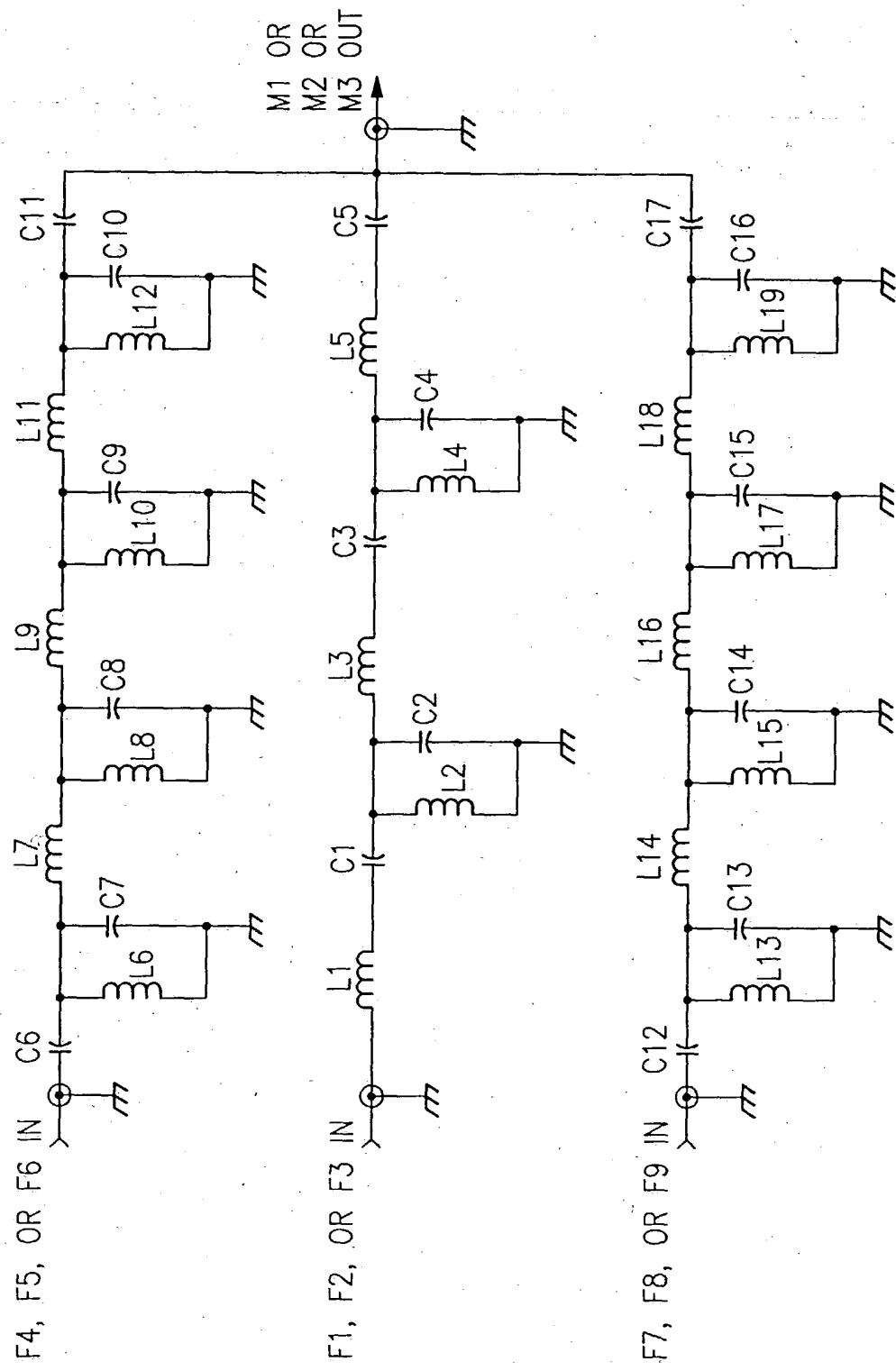


FIG.9